Amendments to the Specification:

Please replace paragraph [25] with the following amended paragraph:

[25] As rotary actuator 201 is driven by the VCM, rotary actuator 201 pivots around a pivot point ~~206~~. As rotary actuator 201 pivots, read/write head 205 sweeps across the surface of hard disk 202 to selected positions that are between one extreme that is toward the center of hard disk 202 (depicted with the outline of rotary actuator 201 shown as solid) to another extreme toward the outer edge of hard disk 202 (depicted with the outline of rotary actuator 201 shown as dotted). As rotary actuator 201 pivots, the motion of read/write head 205 is in an arc with respect to the surface of hard disk 201 that coincides with the radially shape area of servo samples 206 that have been written on the surface of hard disk 202.

Please replace paragraph [26] with the following amended paragraph:

[26] A portion of the areal space on a hard disk that is available for customer data, that is, the areal space that is not used for servo samples, is not used on a conventional HDD because of the physical properties of the angle of rotation of the rotary actuator and the physical separation of the read sensor and the write element of the read/write head. Figure 4 shows an enlarged view of a selected radially shaped servo sample area 400 shown in Figure 2. More specifically, Figure 4 shows an area 401 that is conventionally unused and that precedes servo sample area ~~206~~ 406 as hard disk 202 rotates. A portion ~~502~~ 402 of unused area 401 that is closer to the center of hard disk 202 (Figure 2) is narrower than a portion 403 of unused area 401 that is closer to the outer edge of disk 202.

Please replace paragraph [33] with the following amended paragraph:

[33] Figure 8 depicts the physical arrangement used for determining the angle E of a read/write head ~~801~~ 800 with respect to a circumferential data track 803 at a given radius A. Read/write head ~~801~~ 800 includes a read element 801 and a write element 802. Angle E is given by